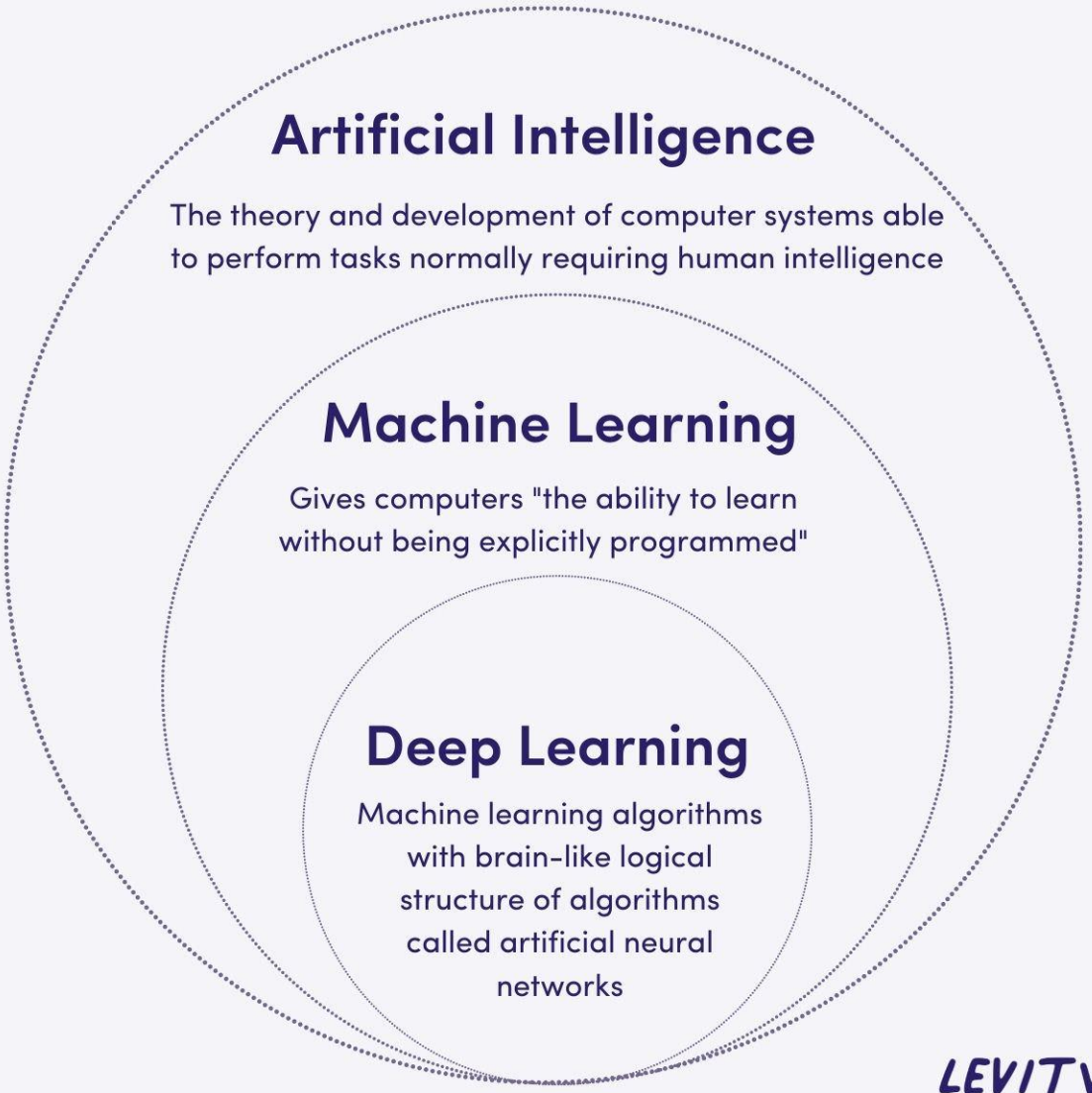
MACHINE LEARNING



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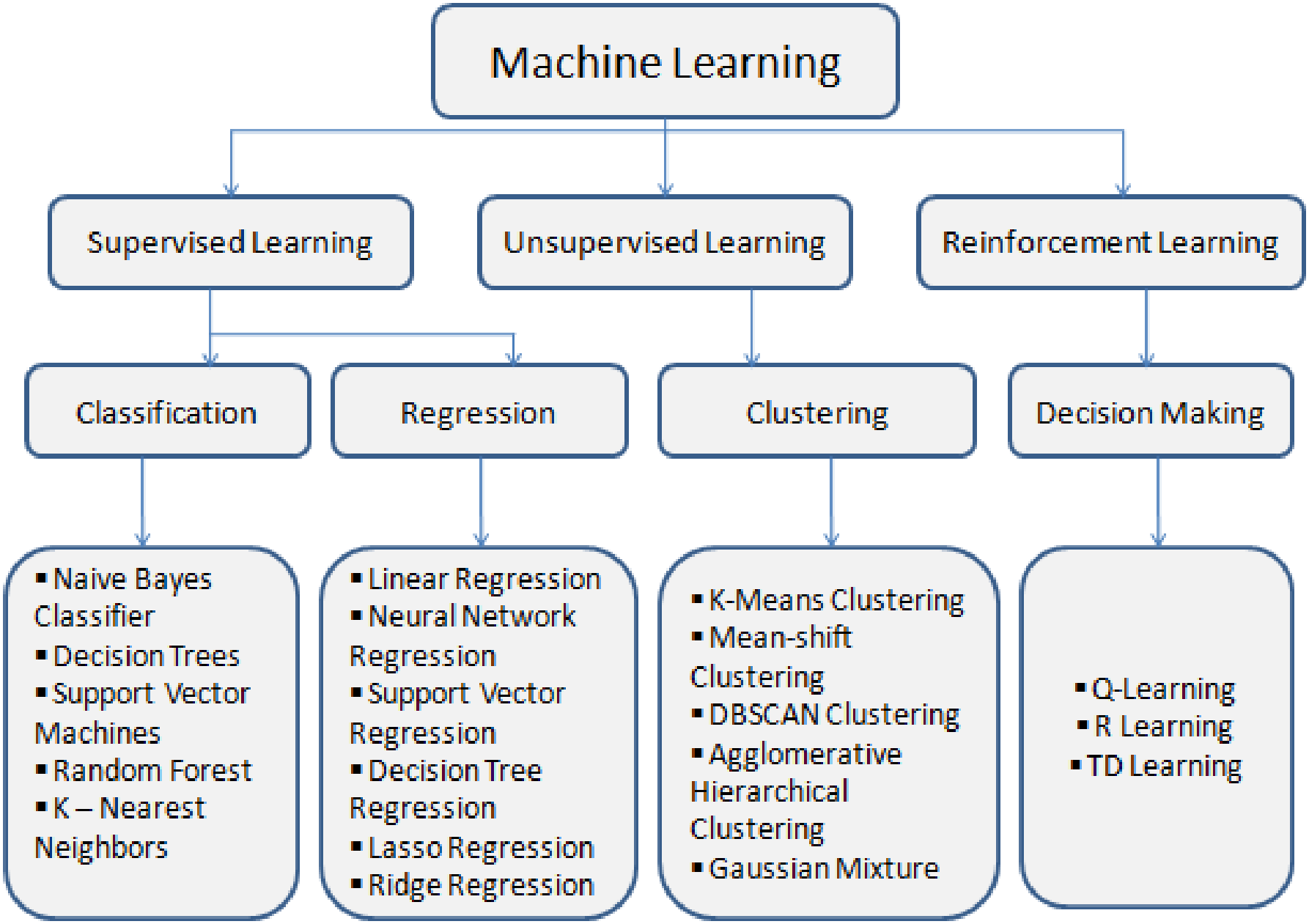

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Linear Regression

5 9 13 17 ___

Find missing number in series ?

6 , 13 , 27 , 55 , 111 , ?

(1)225 (2)228 (3)223 (4)297

Exam Cracker

Which number continues the sequence?

5	7	11	19	35	?

The Magic: A Linear Equation

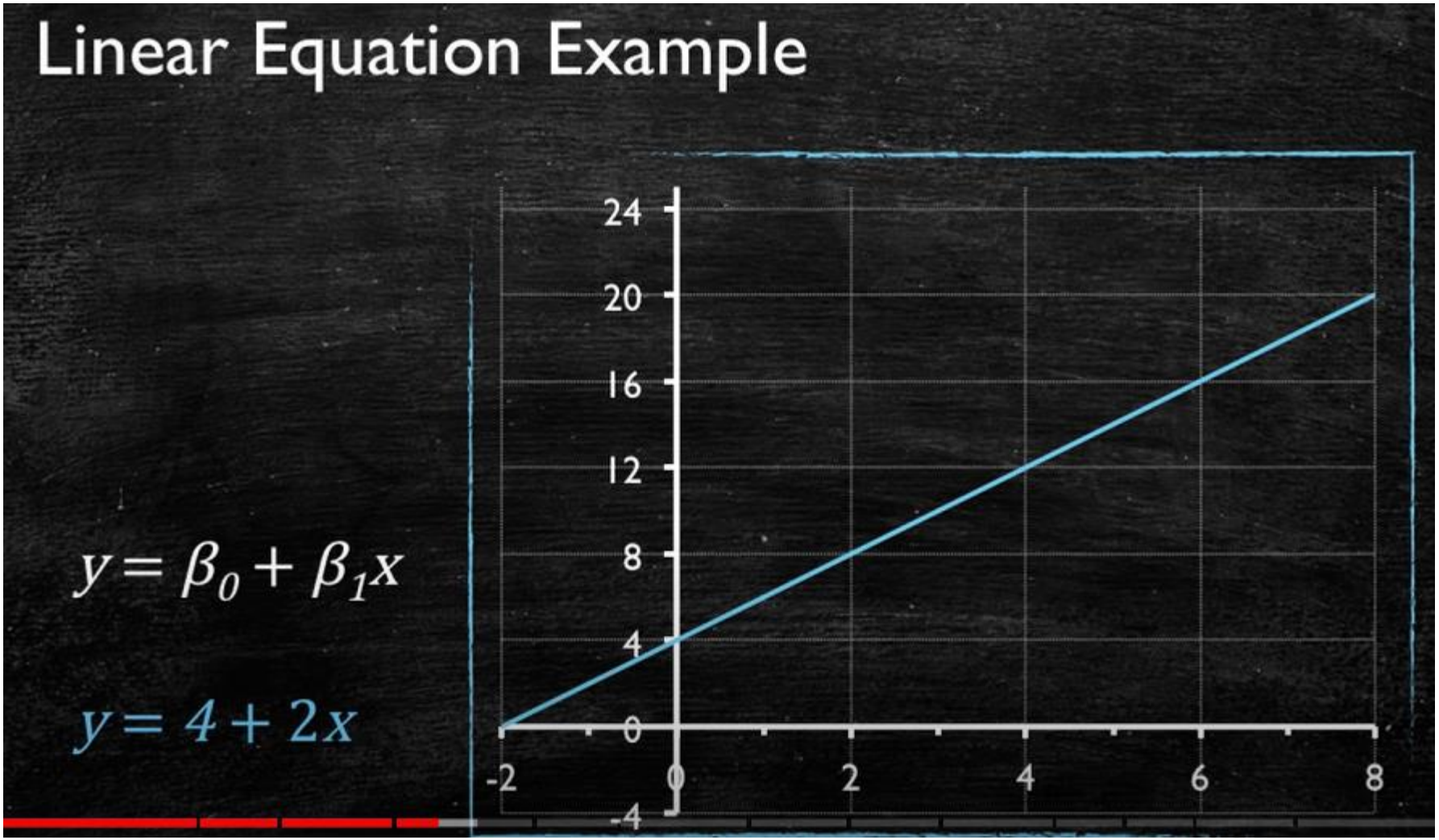
- You may remember one of these:

$$y = a + b\,x$$

$$y = m\,x + b$$

- In the stats world, we just use a different notation:

$$y = \beta_0 + \beta_1\,x$$



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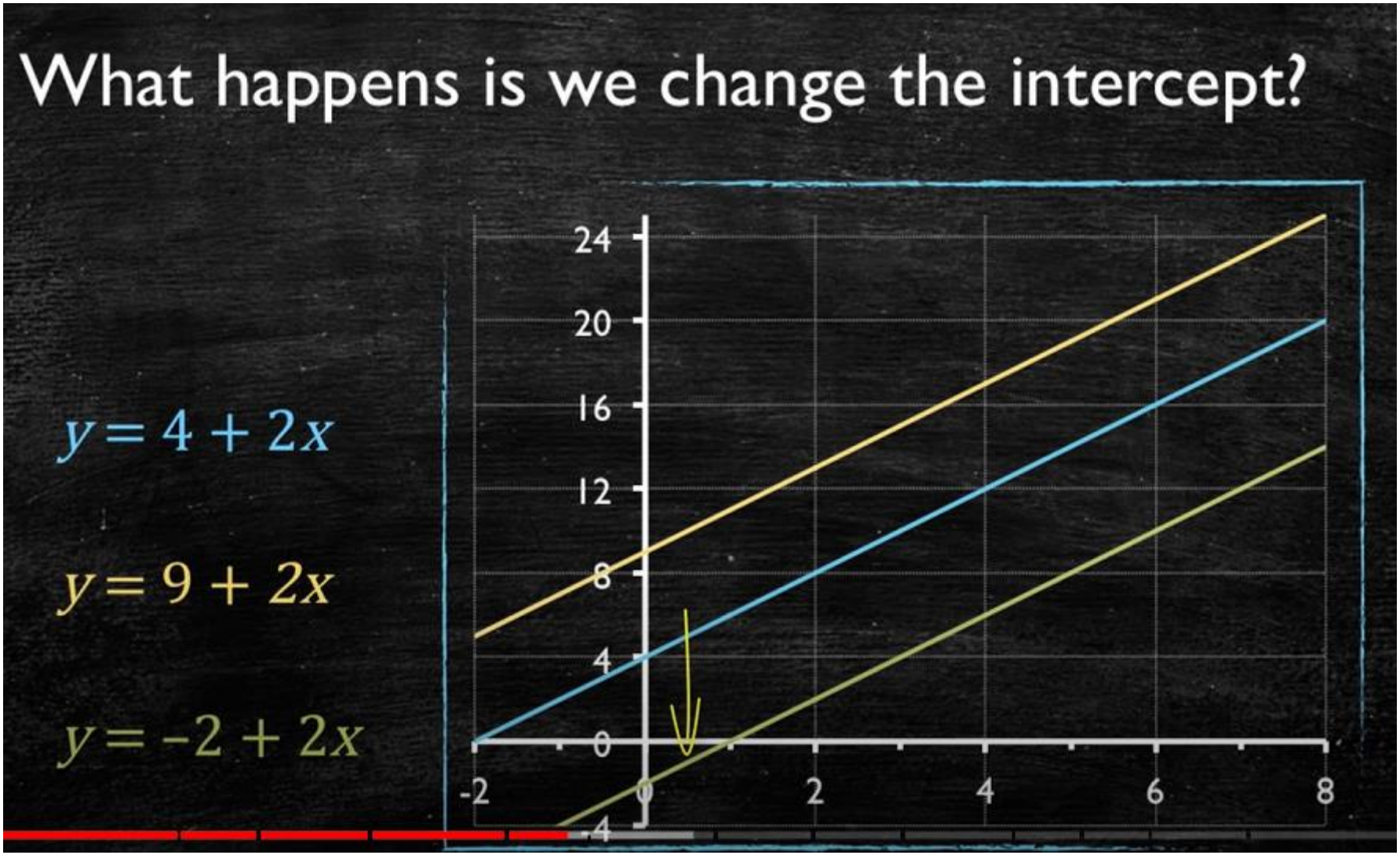
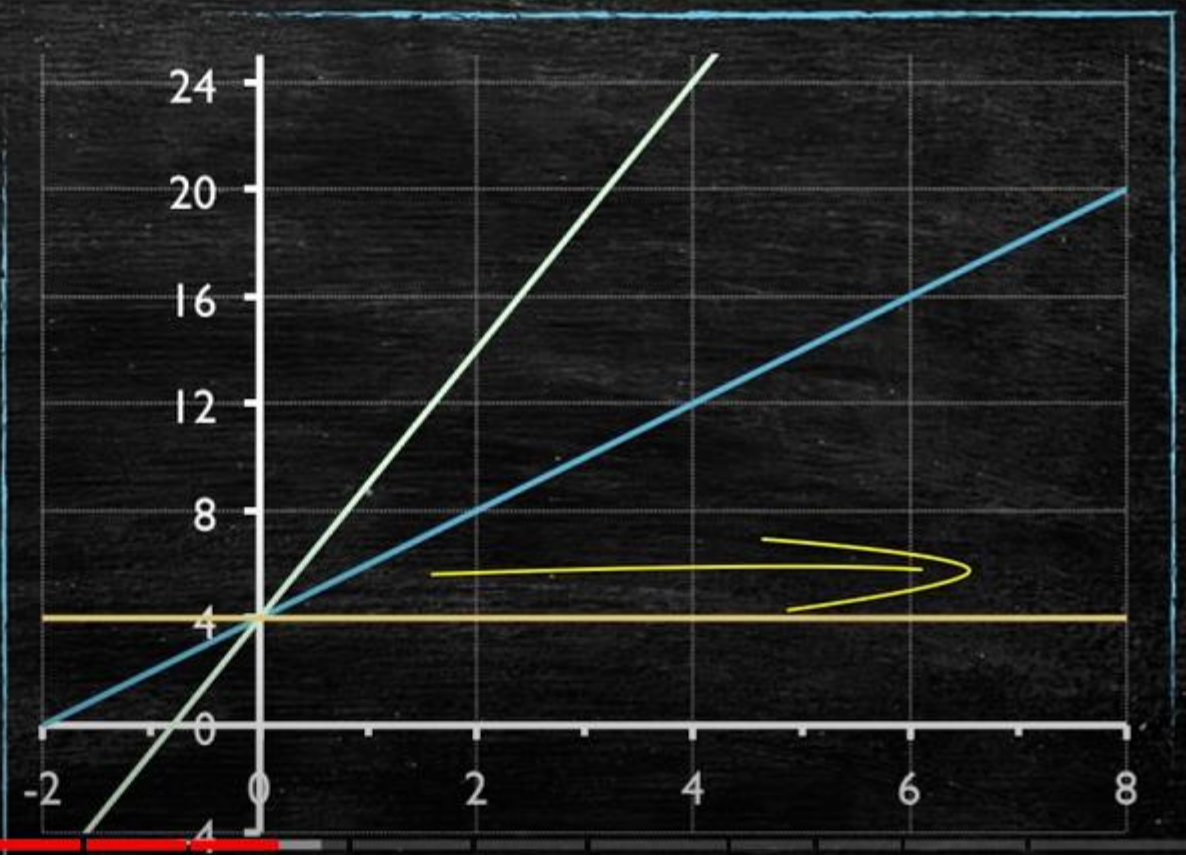

What happens is we change the intercept?
$y = 4 + 2x$
$y = 9 + 2x$
$y = -2 + 2x$
24
20
16
12
8
4
0
-4
-2
0
2
4
6
8

What happens if we change the slope?

$y = 4 + 2x$

$y = 4 + 5x$

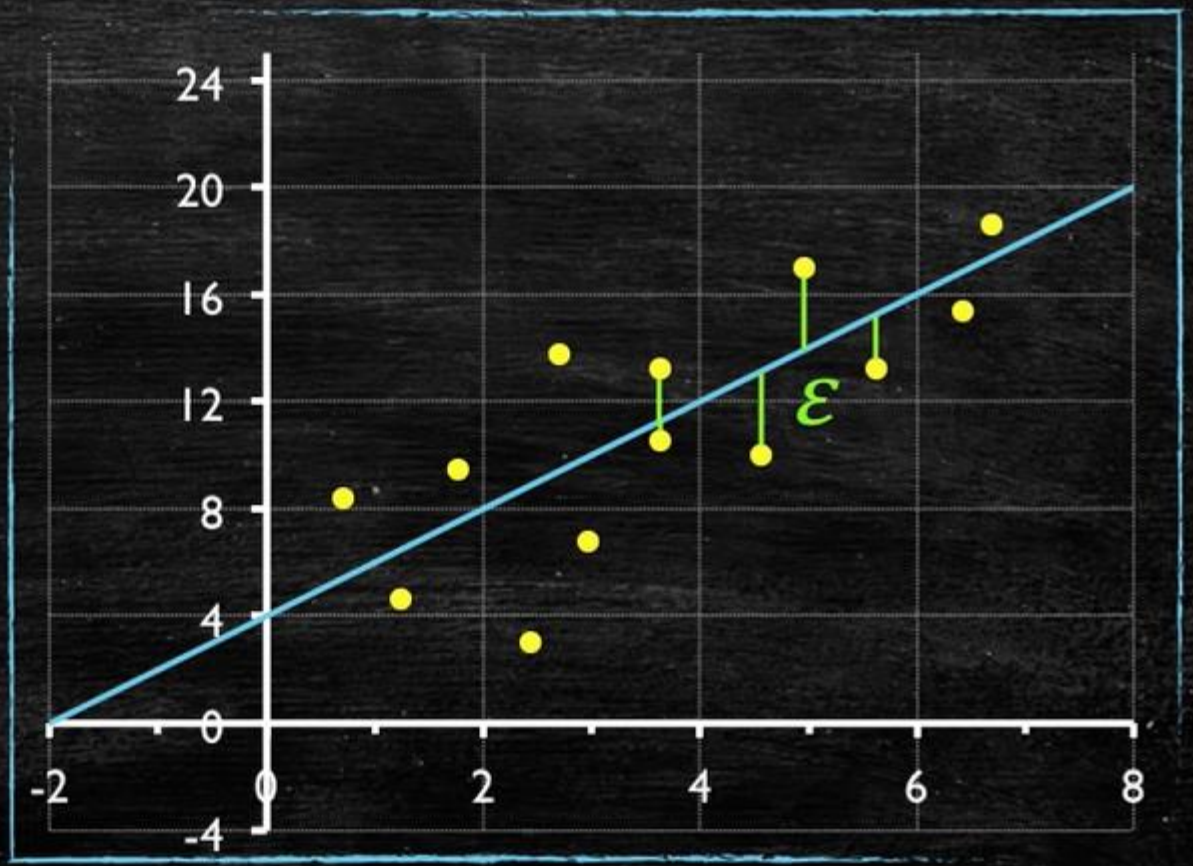
$y = 4 + 0x$
$= 4$

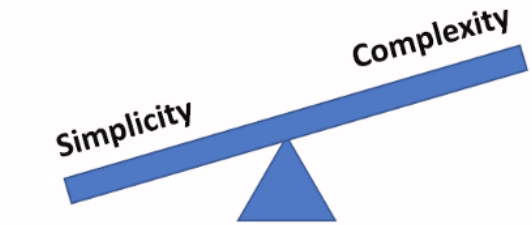


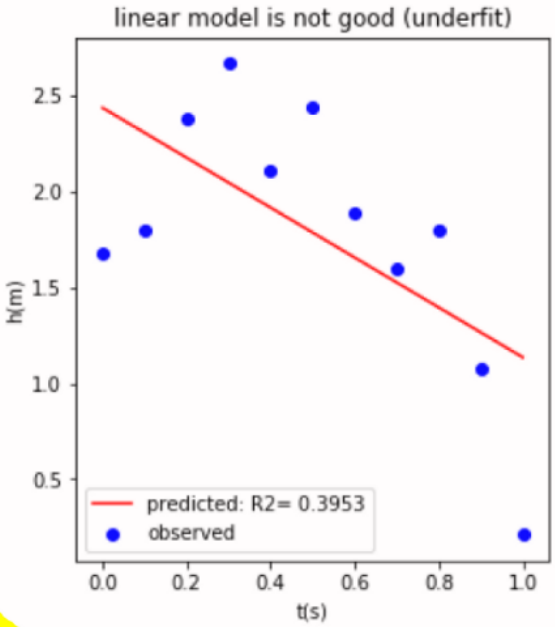
But the world is not linear!

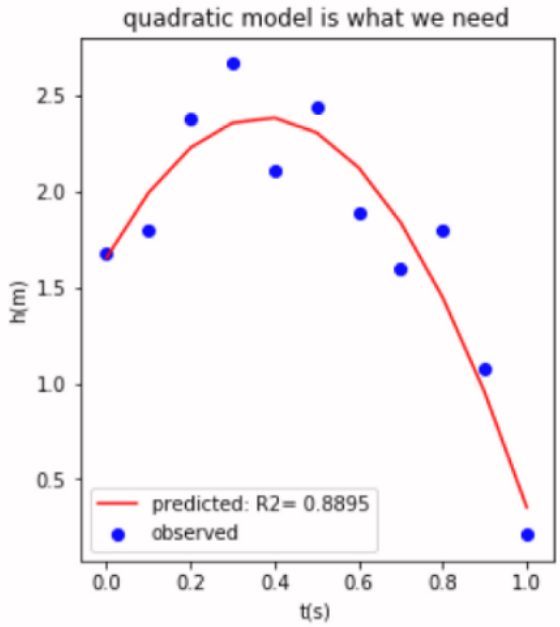
$y = 4 + 2x$

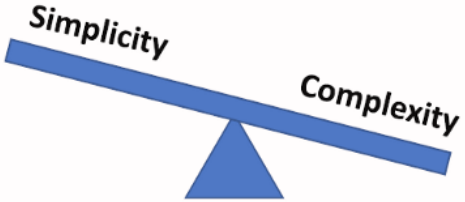
True Values

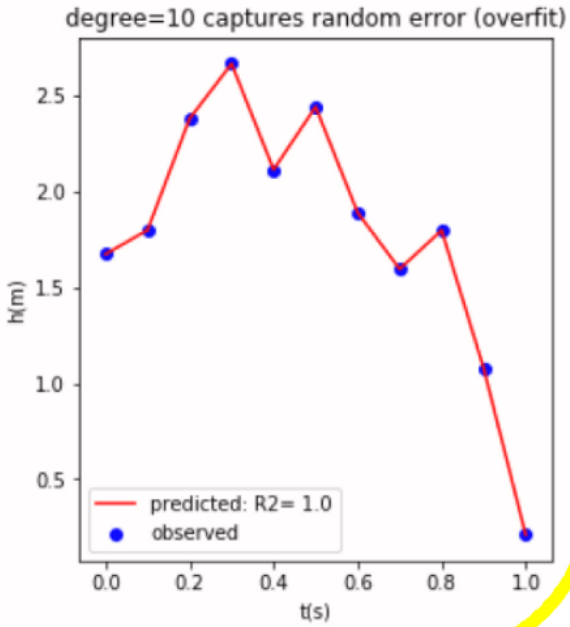


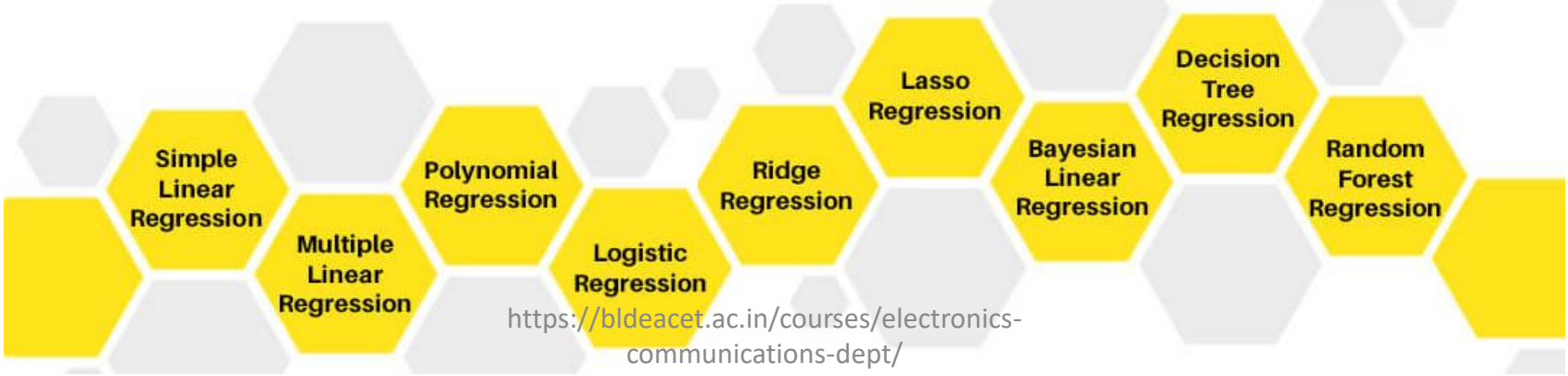












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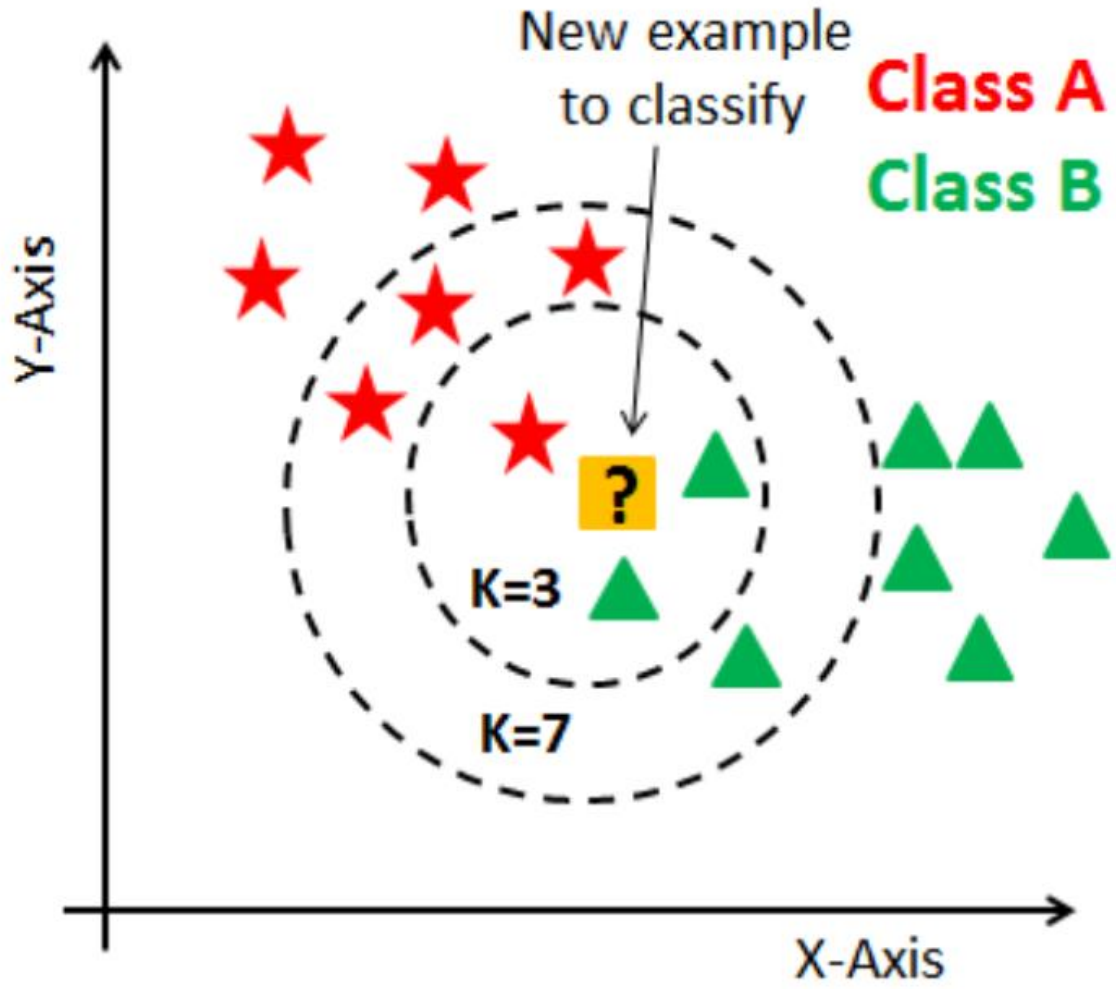
https://github.com/vjkr/Simple-Linear-Regression-Project.git

vjkr/**Simple-Linear-Regression-Project**

KNN Classification



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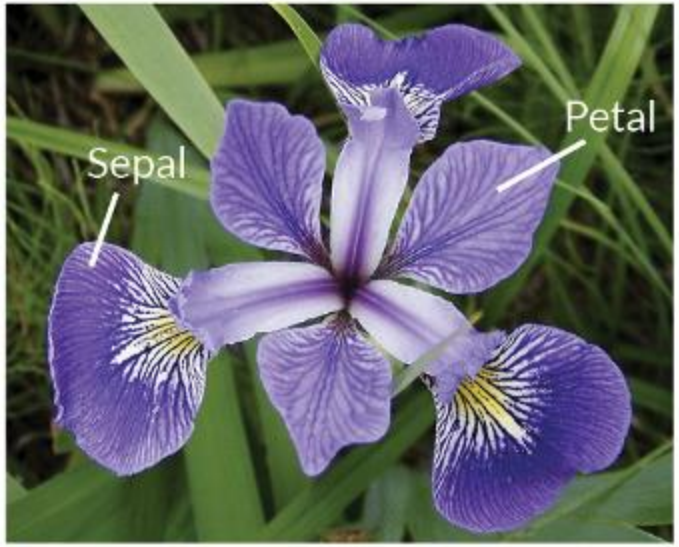


Iris Versicolor

Iris Setosa

Iris Virginica

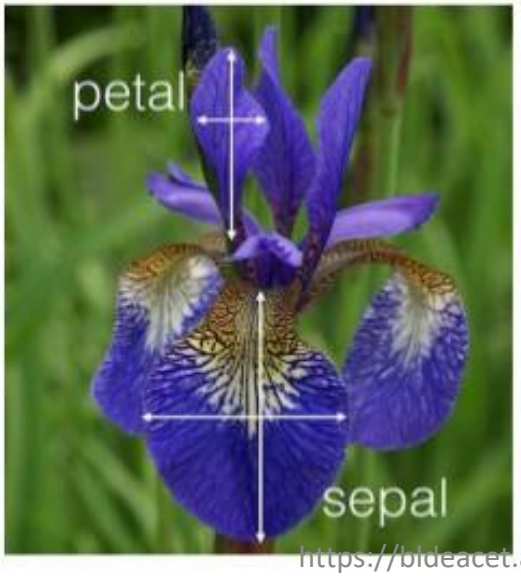
iris setosa

iris versicolor

iris virginica

Supervised learning *classification* problem

(using the Iris flower data set)

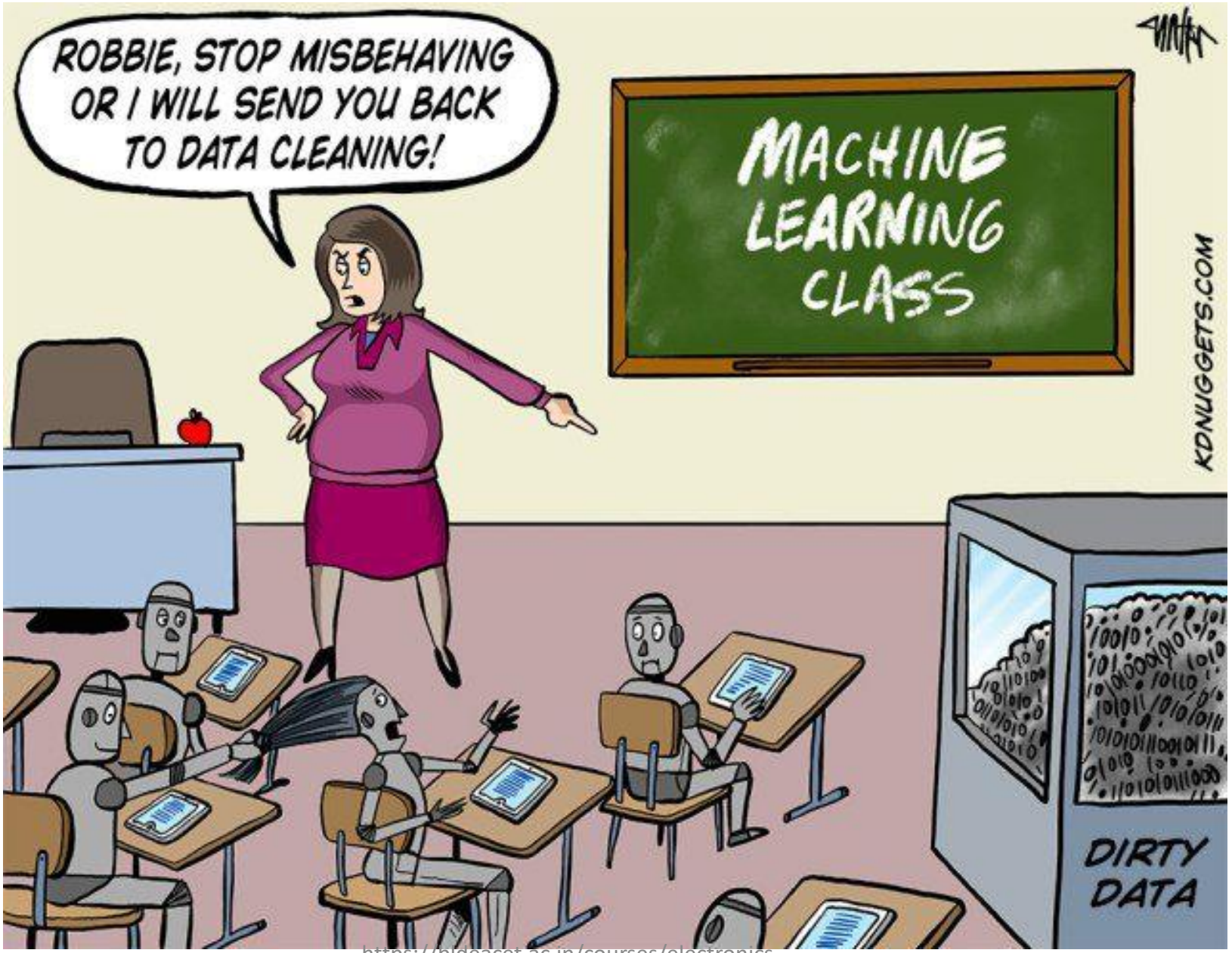


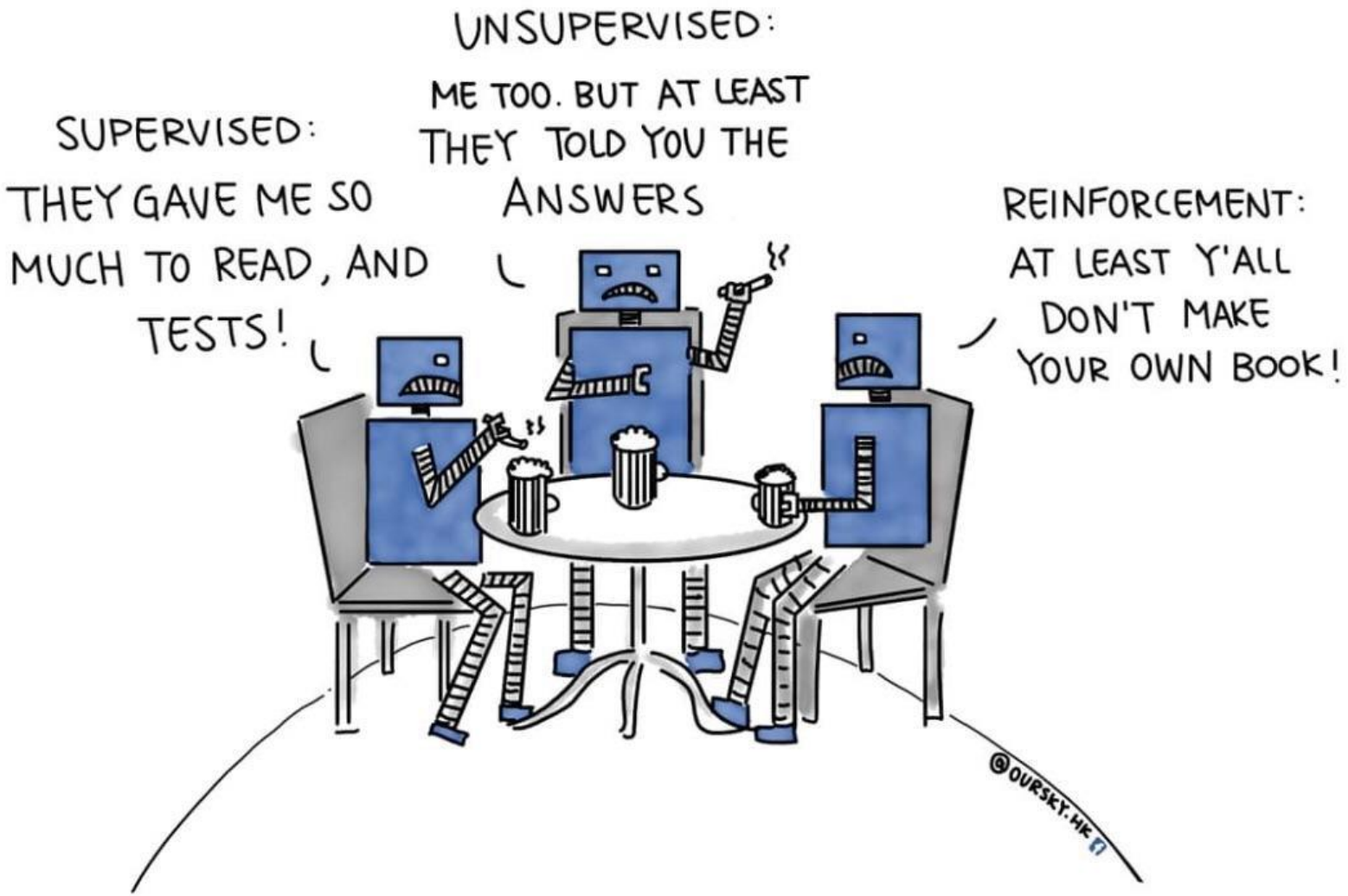
Training / test data

Features				Labels
Sepal length	Sepal width	Petal length	Petal width	Species
5.1	3.5	1.4	0.2	Iris setosa
4.9	3.0	1.4	0.2	Iris setosa
7.0	3.2	4.7	1.4	Iris versicolor
6.4	3.2	4.5	1.5	Iris versicolor
6.3	3.3	6.0	2.5	Iris virginica
5.8	3.3	6.0	2.5	Iris virginica

https://github.com/vjkr/IRIS-Flower-classification.git

vjkr/**IRIS-Flower-classification**


ROBBIE, STOP MISBEHAVING OR I WILL SEND YOU BACK TO DATA CLEANING!
MACHINE LEARNING CLASS
KDNUGGETS.COM
DIRTY DATA



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Assignment 1:
Develop a linear regression model on a custom dataset.